

CLAIMS

What is claimed is:

1. A virtual machine configurable to function as a web server, the virtual machine comprising:
 - 5 a request handler worker for handling queries relating to the virtual machine;
 - a plurality of services wherein a service performs operations for replying to an incoming query; and
 - 10 an operations worker for constructing output containing a reply to the incoming query, wherein the reply provides insight into or effects the operation of the virtual machine.
2. A virtual machine as recited in claim 1 wherein the request handler worker is an HTTP thread.
- 15 3. A virtual machine as recited in claim 2 wherein the incoming query is in HTTP format.
- Sub*
91
20 4. A virtual machine as recited in claim 1 wherein the request handler worker further includes a query parser for parsing the incoming query.
5. A virtual machine as recited in claim 1 wherein the request handler worker is created upon starting up the virtual machine.
- 25 6. A virtual machine as recited in claim 1 wherein the request handler worker functions as a network traffic manager for routing queries and responses.

7. A virtual machine as recited in claim 1 wherein the plurality of services contains an index of available services and parameters for each service.

5 8. A virtual machine as recited in claim 1 wherein the operation worker is a virtual machine operations thread.

9. A virtual machine as recited in claim 1 further including a request data structure for transferring data between the request handler worker and the
10 operations worker.

10. A virtual machine as recited in claim 9 wherein the request handler worker creates the request data structure.

15 11. A virtual machine as recited in claim 9 wherein the request data structure has a service pointer area, a response buffer area, and a segment query area.

20 12. A virtual machine as recited in claim 1 wherein the virtual machine is a Java™ virtual machine.

13. A method of handling an incoming query to a virtual machine comprising:

invoking a network traffic worker for receiving the request;
25 receiving a request from a browser;
processing the request to determine the service needed to respond to the request;
creating a request data structure;
effecting a response to the request by passing the request data structure
30 to a virtual machine operations worker; and
transmitting the response to the browser.

14. A method as recited in claim 13 further including invoking a web server in the virtual machine.

5 15. A method as recited in claim 14 further including creating a request thread.

10 16. A method as recited in claim 15 wherein receiving a request from a browser further includes establishing a secure HTTP connection where the request is an HTTP request.

17. A method as recited in claim 13 wherein processing the request further includes parsing the request into segments thereby determining the service needed to respond to the request.

15 18. A method as recited in claim 17 further including creating a pointer to the service in a service library.

Sub
all
20 19. A method as recited in claim 13 wherein creating a request data structure further includes:
creating a first storage area for holding a pointer to an appropriate service;
creating a second storage area for holding a segment of the request;
and
creating a third storage area for holding a response to the request.

25 20. A method as recited in claim 19 further including generating an HTTP response containing an HTML document into the third storage area of the request data structure.

30 21. A method as recited in claim 19 further including generating XML pages into the third storage area of the request data structure.

22. A method as recited in claim 13 further including performing operations in the virtual machine using the service and under the control of the virtual machine operations worker.

5 23. A method as recited in claim 13 further including stopping normal operation of the virtual machine while the request is acted upon.

24. A method as recited in claim 13 further including sending a response from the virtual machine operations worker to the network traffic worker.

10

25. A method as recited in claim 13 wherein transmitting the response to the browser further includes the network traffic manager sending the response to the browser.

15

26. A computer-readable medium containing programmed instructions arranged to handle an incoming query to a virtual machine, the computer-readable medium including programmed instructions for:

invoking a network traffic worker for receiving the request;

receiving a request from a browser;

20

processing the request to determine the service needed to respond to the request;

creating a request data structure;

effecting a response to the request by passing the request data structure to a virtual machine operations worker; and

25

transmitting the response to the browser.